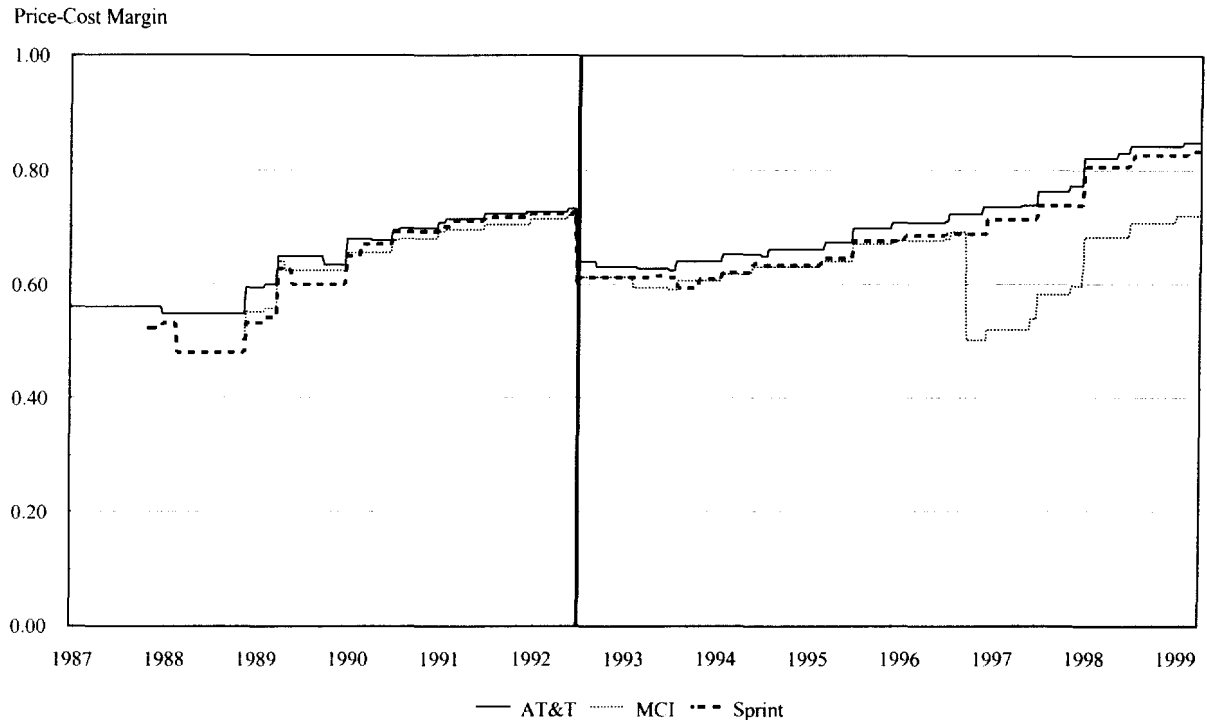


APPENDIX FIGURE THIRTEEN
PRICE-COST MARGINS FOR
DEDICATED OUTBOUND WATS AND DEDICATED COMBINED SERVICE
(1,000 HOURS PER MONTH)



Sources: Marginal costs from FCC and Pacific Bell and rates from HTL Telemanagement, Ltd.

24. *The Possibility of Other, “Additional” Incremental Costs.* Price-cost margin calculations similar to those above have been criticized for allegedly being based on estimates of marginal costs that are too low; for example, expert witnesses for AT&T have taken issue with the specification that incremental long-distance operating costs have been approximately \$0.01 per minute over this period.¹¹ Douglas Bernheim and Robert Willig, for example, state that “a variety of other expenses, such as maintenance,

¹¹ This is despite the fact that I rely in large part upon figures generated and publicized by AT&T itself.

customer service, and billing, may be at least partially incremental.”¹² Since my analyses focus on trends in price-cost margins over time, Bernheim and Willig have thus reproved me for not discussing “how incremental long distance costs, other than access, have changed through time.”¹³ If incremental network costs have been increasing, to levels greater than \$0.01 per minute, the long distance carriers’ price-cost margins would necessarily be lower and might be decreasing over time. Implicit in this criticism is the possibility that, over the 1990s, “additional” incremental costs have offset the declines in network access charges so as to reduce price-cost margins. After all, it is not the absolute size of long distance carrier price-cost margins that indicates lessening competition but increasing price-cost margins over a period of decreasing market concentration.

25. However, these incremental costs, and their alleged increases, are extremely difficult to quantify.¹⁴ When AT&T reports operating expenses to its shareholders, or to the Securities and Exchange Commission (“SEC”), it combines all costs of marketing, advertising, and billing, under “Selling, General, and Administrative” expense.¹⁵ In aggregate these costs are not incremental at any level of service. The

¹² B. Douglas Bernheim and Robert D. Willig (Oct. 1996), *THE SCOPE OF COMPETITION IN TELECOMMUNICATIONS*, p. 83.

¹³ *Ibid.*

¹⁴ Indeed, Bernheim and Willig realize as much when they note that “the volume-sensitive portion of these costs is extremely difficult to measure.” B. Douglas Bernheim and Robert D. Willig (Oct. 1996), *THE SCOPE OF COMPETITION IN TELECOMMUNICATIONS*, p. 83.

¹⁵ See AT&T Corp., Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 For the Fiscal Year Ended December 31, 1999 (S.E.C. Mar. 27, 2000) (hereinafter “AT&T 1999 Form 10-K”). The FCC, furthermore, does not report AT&T’s costs and expenses even to this level of detail. See, e.g., Federal

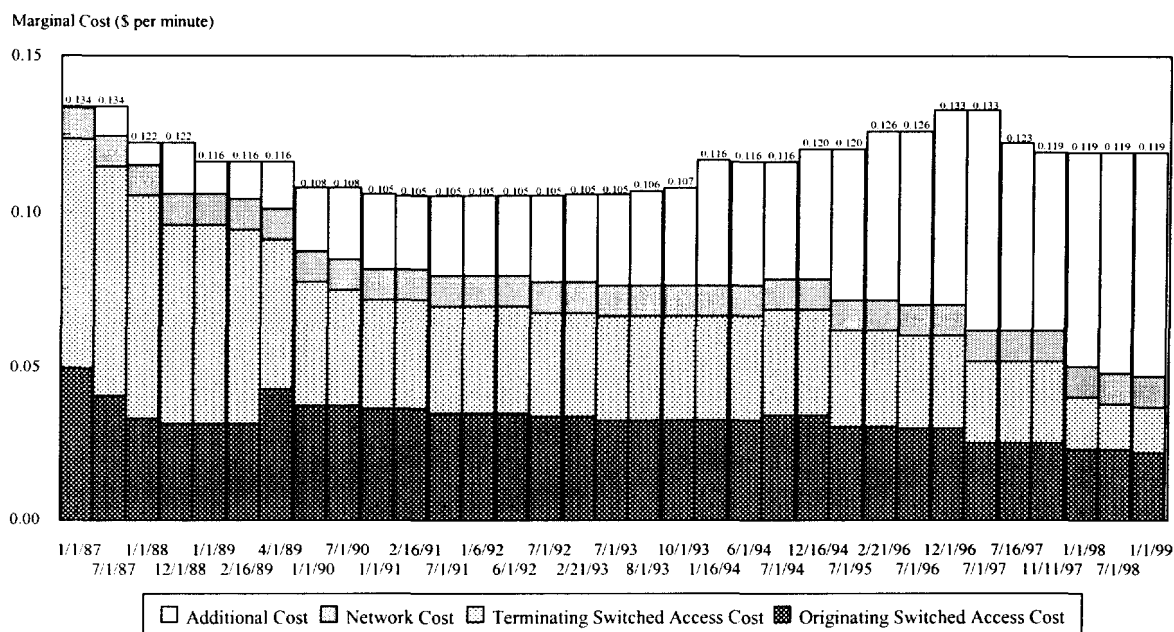
customer service accounts alleged to contain incremental costs are not available, and even if they were that part of these costs that are incremental would be difficult to specify. Nevertheless, for the sake of the argument, I estimate the level of these “additional” costs, and the changes in that level, required to realize constant price-cost margins since 1987.

26. Appendix Figure Fourteen illustrates the results. At the beginning of 1987, AT&T’s marginal cost, assuming zero “additional” costs, would have to have been \$0.134 per minute, yielding a price-cost margin of 0.40. In order to maintain this margin until 1999, AT&T’s per-minute marginal cost would have to have decreased to \$0.105 by 1991, then risen steadily to \$0.133 by the outset of 1997, then fallen again to reach an early 1999 level of \$0.119 per minute. (See Appendix Figure Fourteen.) The alleged “additional” costs would have to have grown over this period by more than seven cents per minute, or more than seven times AT&T’s own estimate of the current level of its incremental network costs. This is nearly twice all originating and terminating switched access charges paid by AT&T and one and a half times greater than all other operating costs.¹⁶

Communications Commission, *Statistics of Communications Common Carriers*, at Table 1.1 (1998 ed. 1999).

¹⁶ Moreover, these results are those needed merely to preserve an *unchanging* margin. In order to produce a *declining* price-cost margin series since 1987, the “additional” costs would have to have increased more rapidly than those shown in Appendix Figure Fourteen.

APPENDIX FIGURE FOURTEEN
HYPOTHETICAL LEVELS OF AT&T'S MARGINAL COST
OF INTERSTATE SWITCHED SERVICE
(IF 1987 PRICE-COST MARGIN IS MAINTAINED)



Note: Includes MTS, WATS Switched Outbound, WATS Switched Inbound and Switched Combined Services.

27. In its 10-K filing with the SEC for 1999, AT&T indicated that its “selling, general, and administrative” (“SG&A”) expenses for that year included those associated with research and development, advertising, marketing, customer acquisition and retention, and sundry one-time initiatives and transitory projects.¹⁷ While AT&T

¹⁷ See AT&T 1999 Form 10-K. Figures for SG&A expenses are the closest thing AT&T makes regularly public regarding the sorts of “additional costs” identified by Bernheim and Willing. Admittedly, however, SG&A expenditures do not provide a very reliable indicator of these costs. AT&T’s overall SG&A expenditures have generally increased throughout the 1990s, for instance, but it is not clear whether and to what extent any of this increase can be attributable to incremental costs. As noted above, AT&T does not break down this category into discrete elements for advertising, marketing, and so on – much less for interLATA service specifically. As a result, any data relating to marginal advertising or customer service activities over these years is thrown into the same mix with such decidedly non-incremental activities as the divestiture of Lucent and the

reports that SG&A expenses did in fact rise from 1998 to 1999, it explains that “the increase was due to” the company’s purchase of Tele-Communications, Inc. (“TCI”) and IBM’s Global Network business – and not to hidden, additional costs in the provision of interLATA telephony.¹⁸ On the contrary, AT&T points out that SG&A spending with regard to the company’s core long-distance business has been declining as a result of the carrier’s efforts to achieve a “best-in-class cost structure.”¹⁹ According to AT&T, “[r]eductions in consumer long distance acquisition-program spending resulted in lower marketing and sales expenses,” and the company expects “SG&A expenses as a percent of revenue to continue to decline as we continue to focus on controlling our expenses and prioritizing our spending.”²⁰ Indeed, AT&T observes that SG&A expenses would have been even lower than reported had it not been for increased costs relating to such non-

acquisitions of McCaw Cellular Communications and TCI. *See, e.g.*, AT&T, Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 For the Fiscal Year Ended December 31, 1997 (S.E.C. Mar. 27, 1998) (hereinafter “AT&T 1997 Form 10-K”); AT&T, Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 For the Fiscal Year Ended December 31, 199 (S.E.C. Mar. 31, 1997); AT&T, Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 For the Fiscal Year Ended December 31, 1995 (S.E.C. Feb. 28, 1996); AT&T, Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 For the Fiscal Year Ended December 31, 1994 (S.E.C. 1995).

¹⁸ AT&T 1999 Form 10-K. Over the last few years, AT&T has given similar explanations for rising SG&A expenses. In 1998, the company noted that “upward pressure on SG&A expenses” was primarily a result of such non-interLATA efforts as the year 2000 fix and marketing for its wireless business. In 1996, however, AT&T did see some increased outlays resulting from “higher marketing and sales expenses . . . and enhancements to customer care facilities.” AT&T 1997 Form 10-K.

¹⁹ AT&T 1999 Form 10-K.

²⁰ *Ibid.* This has generally been the case over recent years. AT&T reported, for example, that an increase in overall SG&A spending from 1996 to 1997 occurred despite reductions in “core” SG&A spending, which came about “primarily from lower

interLATA initiatives as wireless customer support, business data services, and Internet Protocol research and development.²¹

28. Similarly, recent AT&T 10-Q filings with the SEC cite decreasing SG&A expenses resulting from its interLATA operations, a trend which AT&T states “reflect[s] reduced marketing and sales expenses resulting primarily from reductions in consumer acquisition program spending and other cost-control initiatives.”²² Again, AT&T notes that these reductions have been taking place, even when overall SG&A levels rise on account of “increased spending in the company’s growth businesses,” a category that includes such things as wireless and the AT&T Solutions outsourcing unit.²³

29. AT&T highlights its reduction of SG&A costs by \$1.6 billion in 1998 alone,²⁴ furthermore, and it has recently “committed to cutting \$2 billion in costs by the end of 2000 by continuing to streamline our SG&A expenses and by lowering our

advertising expenses across the company, lower acquisition costs in consumer markets . . . , and lower marketing and sales expenses in business markets.” AT&T 1997 Form 10-K.

²¹ AT&T 1999 Form 10-K.

²² AT&T Corp., Form 10-Q: Quarterly Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 For the Quarterly Period Ended September 30, 1999 (S.E.C. Nov. 15, 1999) (hereinafter “AT&T 3Q1999 Form 10-Q”). Such results are not unique to this most recent 10-Q filing. In the second quarter of 1998, for example, AT&T again reported SG&A reductions “due primarily to a decline in costs associated with marketing and sales in consumer services, as a result of better targeting and efficiency gains in customer acquisition efforts, and lower marketing and sales in business services, achieved largely through consolidation of functions and reductions of support staff headcount.” AT&T, Quarterly Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 For the Quarterly Period Ended June 30, 1998 (S.E.C. Aug. 13, 1998).

²³ AT&T 3Q1999 Form 10-Q.

²⁴ AT&T, Quarterly Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 For the Quarterly Period Ended June 30, 1998 (S.E.C. Aug. 13, 1998).

network costs.”²⁵ These ongoing strategies for cost reductions are inconsistent with its expert witnesses’ assertions that levels of “additional” incremental costs have increasingly offset access charge reductions so as to hold down increases in price-cost margins. But they are consistent with findings here that AT&T price-cost margins have been increasing, in markets where AT&T’s shares of revenues have been decreasing.

30. ***The Use of ARPM as a Measure of Price.*** Expert witnesses testifying on behalf of MCIWorldCom and AT&T in recent years have maintained that markets for interLATA services are competitive, and that this competition is evidenced in declining average revenue per minute (“ARPM”) of services realized by incumbent long distance carriers.²⁶ They have used ARPM minus access costs as the measure of price-cost margins to argue that there has been a trend of falling margins.

²⁵ AT&T 1999 Form 10-K.

²⁶ See, e.g., Affidavit of T. Randolph Beard and John W. Mayo on Behalf of MCI WorldCom, Inc., Application of Ameritech Michigan Pursuant to Section 271 of the Telecommunications Act of 1996 to Provide In-Region, InterLATA Services in Michigan, CC Dkt No. 97-137 (F.C.C. June 1997); Affidavit of B. Douglas Bernheim, Janusz A. Ordovery, and Robert D. Willig on Behalf of AT&T Corp. Before the Federal Communications Commission, Application of Ameritech Michigan Pursuant to Section 271 of the Telecommunications Act of 1996 to Provide In-Region, InterLATA Services in Michigan, CC Dkt No. 97-137 (F.C.C. June 1997); Affidavit of Robert Hall on Behalf of MCI Telecommunications Corporation Before the Federal Communications Commission, Application of Ameritech Michigan Pursuant to Section 271 of the Telecommunications Act of 1996 to Provide In-Region, InterLATA Services in Michigan, CC Dkt No. 97-137 (F.C.C. June 1997); Affidavit of R. Glenn Hubbard and William H. Lehr on Behalf of AT&T Corp. Before the Federal Communications Commission, Application of Ameritech Michigan Pursuant to Section 271 of the Telecommunications Act of 1996 to Provide In-Region, InterLATA Services in Michigan, CC Docket No. 97-137 (F.C.C. June 1997).

31. But ARPM is not an appropriate measure of a representative transaction price for some classes of service. No consumer has ever picked up a telephone, placed a call, and paid ARPM.²⁷ Nevertheless, whether one considers rates paid by customers, or ARPM, to represent prices in the interLATA marketplace, it is the price-cost margin over time, and not prices themselves, that indicates the state of “competition” within markets.²⁸ Even if one were to select ARPM as the appropriate indicator, the resulting “ARPM-cost margin” demonstrates the same positive trend in margin in a period when concentration has been declining. Not even this flawed measure can demonstrate that long-distance markets have become more competitive since the 1984 AT&T divestiture.

32. Current data on ARPM for 1996 are available from the FCC’s Industry Analysis Division, and previous figures for 1992 through 1995 have previously been

²⁷ This is a “measure zero” event since it occurs with a vanishingly small probability. That is, the probability that the tariff price of a call exactly equals ARPM to an arbitrary accuracy is approximately zero.

²⁸ Intuitively, the error in using the absolute difference between price and marginal cost as a measure of competitiveness (versus the correct measure of price minus marginal cost, divided by price) can be explained as follows. The absolute difference between price and marginal cost varies with a change in price according to a constant. Thus, suppose that the price of a service equals \$2 and the marginal cost equals \$1. Now let the price decrease to \$1 and the marginal cost to \$0.50, so that the absolute difference falls. But since the change in the absolute difference varies with the change in price according to a constant, it necessarily follows that the ratio of the absolute difference to price must be the same in both cases (*i.e.*, $(\$2 - \$1) / \$2$ equals $(\$1 - \$0.50) / \$1$). Thus the fall in the absolute difference has no implication for competitiveness. A reduction in the absolute difference between price and marginal cost is only indicative of increased competitiveness if the ratio of that difference as a percentage of price (*i.e.*, price - marginal cost / price) does not remain constant but rather declines as a result of reductions in market concentration (HHI) or increased price competitiveness on the part of firms (conjectural variation).

issued and then modified slightly in the 1996 issue.²⁹ These data show a reduction in ARPM, net of access costs, for all nationwide interstate services together over the years 1992 to 1996.³⁰ The measure “*m*,” equal to ARPM net of access costs, is not by itself relevant; for each service the measure would be different, after all, regardless of the level of competitiveness. The relevant measure is *m* divided by ARPM. This ratio reveals that, despite falling costs and ARPM, margins increased over the period 1992 to 1996 by approximately two percent per year. Appendix Table Six indicates this pattern.

33. From 1992 to 1996, the average access cost per minute fell 21 percent, while ARPM net of access costs decreased by little more than 7 percent. But ARPM itself decreased by 13 percent so that the ARPM-cost margin divided by ARPM remained flat or increased. Overall, there was an *increase* in margins of almost 7 percent from 1992

²⁹ The FCC ceased tracking and reporting revenues and minutes of use for interstate domestic direct dialed (“DDD”) calling in 1997. As a result, 1996 is the last year for which billed revenue per interstate DDD minute is available. The FCC does continue to report “end-user revenue per interstate domestic conversation minute,” but this figure includes data relating to operator-assisted, pay telephone, and calling card services. (The FCC cautions its readers, furthermore, that these estimates are “problematic” and “should be treated with great caution for a number of reasons.”) Jim Lande, Industry Analysis Division, Federal Communications Commission, *Telecommunications Industry Revenue: 1998*, at 5 and Tables 9-10 (Sept. 1999). See also Jim Lande and Katie Rangos, Industry Analysis Division, Federal Communications Commission, *Telecommunications Industry Revenue: 1997*, at Table 5 (Oct. 1998); Jim Lande and Katie Rangos, Industry Analysis Division, Federal Communications Commission, *Telecommunications Industry Revenue: TRS Fund Worksheet Data 12* (Nov. 1997).

³⁰ Jim Lande and Katie Rangos, Industry Analysis Division, Federal Communications Commission, *Telecommunications Industry Revenue: TRS Fund Worksheet Data 12* (Nov. 1997). Under the newer reporting methodology, revenue “per minute net of access and universal service” for interstate domestic calling fell each year from 1993 to 1997, but rose in 1998 to equal 1994 levels. See Jim Lande, Industry Analysis Division, Federal Communications Commission, *Telecommunications Industry Revenue: 1998*, at Tables 9 and 10 (Sept. 1999).

to 1996. On the chosen measure of MCIWorldCom's own experts, markets have become less competitive in the 1990s.

APPENDIX TABLE SIX
ARPM-COST MARGINS

	ARPM	Average Access Cost per Minute	ARPM <i>minus</i> Average Access Cost per Minute	(ARPM <i>minus</i> Average Access Cost per Minute) <i>divided by</i> ARPM
1992	\$0.1331	\$0.0562	\$0.0769	0.578
1993	\$0.1287	\$0.0532	\$0.0755	0.587
1994	\$0.1249	\$0.0520	\$0.0729	0.584
1995	\$0.1168	\$0.0490	\$0.0678	0.580
1996	\$0.1157	\$0.0444	\$0.0713	0.616

Source: Jim Lande and Katie Rangos, Industry Analysis Division, Federal Communications Commission, TELECOMMUNICATIONS INDUSTRY REVENUE: TRS FUND WORKSHEET DATA 12 (Nov. 1997).

34. ***AT&T's \$3.00 Minimum Monthly Charge to New Customers.*** There are various tactical measures by which a long-distance carrier sheltered from competition can extract increased margins from the subscriber base without raising prices. One could, for instance, shorten the period during which lower off-peak calling rates apply and extend the hours during which higher on-peak rates apply, as AT&T did in November of 1997. Alternatively, one could require subscribers to pay for calls that they *don't actually make*. As a case in point, on August 14, 1998, AT&T issued a press release announcing its introduction of a "\$3 monthly minimum usage charge for all new residential customers."³¹ The charge, which took effect the next day, established minimum monthly

³¹ AT&T News Release, *AT&T Announces \$3 Monthly Minimum for New Residential Customers* (Aug. 14, 1998).

payment requirements for residential customers, regardless of usage in that period. According to AT&T, “[c]ustomers subject to the minimum will pay the charge only for those months when their long distance charges are less than \$3, and they will pay only the difference between \$3 and what they spend [on actual usage] during the month.”³² If, for example, a subscriber places calls totaling only two dollars in a given month, the bill from AT&T would have the consumer submit an additional dollar to meet the minimum requirement.³³ All non-AT&T customers attempting to sign up with one of the carrier’s discount calling plans on August 15 were subject to this charge, and all new AT&T customers subscribing on a standard MTS plan later became subject to the minimum.³⁴

35. AT&T states that customers should remit at least \$36.00 per year to “pay for their share of costs;”³⁵ instituting the minimum charge is “an important step to cover the costs of providing service to all residential customers,” particularly as the “costs of serving customers who spend less than \$3 a month on long-distance calling cause AT&T to lose approximately \$300 million annually.”³⁶ AT&T implied in its press

³² *Ibid.*

³³ Indeed, this practice only lends credence to my criticism of average revenue per minute as a reliable measure of price. The introduction of the minimum monthly usage charge will, other factors remaining the same, cause an increase to AT&T’s ARPM, as revenue from subscribers is increasing over the same volume of calling minutes. This is so even if the official per-minute rates for the underlying services remain constant.

³⁴ AT&T News Release, *AT&T Announces \$3 Monthly Minimum for New Residential Customers* (Aug. 14, 1998). The three-dollar minimum was to take effect for all new customers signing up for AT&T’s basic rate schedule on August 21 of that year.

³⁵ *Ibid.*

³⁶ *Ibid.*

release that 15 percent of its subscribers fail to make three dollars worth of calls in any given month.³⁷

36. Although AT&T characterizes the three dollar charge as a minimum usage requirement, it effectively represents a substantial increase in MTS prices for low-volume residential users that possess the least elastic demand for long distance calling. Assuming for the sake of argument that the average interLATA toll call is four minutes long,³⁸ an AT&T customer subject to the minimum charge who makes only three long-distance calls a month will effectively pay a rate of \$0.250 per minute; the rate is \$0.375 for two calls of average length per month. A customer making only one long-distance call in a given month will be charged as though the price for MTS were \$0.750 per minute, resulting in a price-cost margin of more than 90 percent for AT&T on that call. Unless 50 cents per minute of additional costs have been incurred by this carrier in completing that call, this is non-competitive price discrimination.

37. ***Recent Calling Plan Announcements.*** In 1999, AT&T, MCIWorldCom, and Sprint all began advertising residential calling plans that claim reduced per-minute rates, some as low as five cents per minute for calling during certain

³⁷ "Based on current spending levels, AT&T estimates that, in any month, 85 percent of its new customers will spend \$3 a month and will not be affected by the minimum." AT&T News Release, *AT&T Announces \$3 Monthly Minimum for New Residential Customers* (Aug. 14, 1998). See also Sarah Schmelling, A Minimum Price to Pay, *Telephony*, Sept. 7, 1998, at 33 (citing estimate of AT&T Chairman C. Michael Armstrong).

³⁸ In 1998, there were approximately 688 billion originating and terminating interLATA billed access minutes, both interstate and intrastate. Dividing half this total by the number of interLATA toll calls completed that year (nearly 78 billion), we can estimate that the average interLATA call is approximately 4.4 minutes long. Federal Communications Commission, *Statistics of Communications Common Carriers*, at Table 2.6 (1998 ed. 1999).

parts of the day. The question is whether these new plans constitute genuine price reductions that result from competition not presently observed.³⁹ On close examination, while high-volume customers can expect to realize reductions from enrolling in these plans, the majority of small- to medium-intensity users will realize effective price increases. These developments fit into a pattern of pricing by the three large long distance carriers that has been underway for several years in which price discrimination has intensified.

38. In July of 1999, Sprint announced its “Nickel Nights” calling plan, which – for a “Low \$5.95 monthly fee” – offers 1+ interstate calling at the rate of five cents per minute between the hours of 7:00 p.m. and midnight every day and ten cents per minute all other times.⁴⁰ The following month, MCIWorldCom responded with two new plans of its own. The “MCI 5¢ Everyday” plan surpasses the Sprint offering in terms of the number of hours over which the five cent rate is applicable (from 7:00 p.m. to 7:00 a.m. every Monday through Friday and all day on Saturday and Sunday), and the monthly fee is considerably less at \$1.95. The rate under the plan for all other interstate calls, however, is \$0.25 per minute.⁴¹ MCI’s second offering, “MCI 5¢ Everyday Plus,”

³⁹ See, e.g., MCI Broadens Nickel Per Min. Calling Plan to Weekdays, *Communications Daily*, Aug. 10, 1999 (statement of John Donoghue, MCIWorldCom senior vice president of consumer marketing).

⁴⁰ Sprint, Sprint Nickel Nights – 5¢ a Minute Every Night, <http://csg.sprint.com/home/nickel/index.html> (Aug. 26, 1999). The five cent rate hours are extended from 5:00 p.m. to midnight for callers in California and Hawaii. *Ibid*; see also Sprint Introduces Nickel-A-Minute Calling Every Evening, PR Newswire, July 19, 1999.

⁴¹ See, e.g., MCI Broadens Nickel Per Min. Calling Plan to Weekdays, *Communications Daily*, Aug. 10, 1999; Reuters, Off-Peak Rates As Low as 5 cents In MCI Offer, *N.Y. Times*, Aug. 10, 1999, at C3.

decreases this weekday daytime rate from \$0.25 to \$0.10 per minute but raises the monthly fee to \$4.95. Under both plans, customers are subject to a \$5.00 monthly spending minimum not unlike the three dollar minimum imposed by AT&T a year earlier.⁴²

39. As with the AT&T \$3.00 minimum discussed above, the \$5.00 monthly flat charge on the new MCIWorldCom plans represents a substantial increase in MTS prices for low-volume residential users. If the average interLATA toll call is four minutes long, then a MCIWorldCom customer would have to place as many as twenty-five long distance calls each month in order to realize the advertised five cent rate. For consumers with lesser calling volumes, the monthly flat charge and the usage charges together represent a price hike: Even if a customer were able to qualify for the five cent rate across her entire bill, never placing any weekday daytime long distance calls, she would still face from MCIWorldCom an effective rate of \$0.125 per minute if she placed, say, only ten calls per month.

40. Industry observers have come to the same conclusion. Taking into consideration the monthly fees and calling patterns, consumer groups and other carriers have demonstrated that consumers with modest calling volumes are not likely to reap any

⁴² See, e.g., MCI Broadens Nickel Per Min. Calling Plan to Weekdays, *Communications Daily*, Aug. 10, 1999; AT&T News Release, AT&T Announces \$3 Monthly Minimum for New Residential Customers (Aug. 14, 1998). Apparently, the \$1.95 and \$4.95 monthly fees contribute toward satisfaction of the \$5.00 minimum charge under the MCIWorldCom plans.

price benefits from the new plans, particularly when compared to the carriers' other existing discount MTS plans.⁴³

41. There is no apparent cost variation between low- and high-volume residential callers that would justify such disproportionate price changes.⁴⁴ If it were true that serving low-use customers generated marginal costs significantly greater than those of high-use ones, then it would be difficult to determine whether or not these effective price increases for low-volume customers relative to high-volume customers were the result of escalating tacit collusion on the part of the long distance carriers or the result of legitimate competition. However, there is in fact no evidence to suggest that such a cost

⁴³ Indeed, according to the Telecommunications Research and Action Center, a caller would have to make about eighteen average-length calls per month, or "about three hours of talking," to have the MCI 5¢ Everyday pricing scheme "break even" with such other MCI discount plans as MCI OneSavings. CBS News Transcript, "Sam Simon, Chair of the Telecommunications Research & Action Center, Discusses the New Five-Cent Calling Plans Among the Top Three Telephone Companies," CBS This Morning (Aug. 11, 1999). Furthermore, a rate comparison recently issued by interexchange provider Talk.com and reported by PR Newswire estimated that, taking into account calling times and monthly fees, an "average" customer could expect to pay effective per minute rates of \$0.125 cents under the MCI 5¢ Everyday plan, \$0.126 under Sprint Nickel Nights, and \$0.138 under AT&T's One Rate plan. According to the report, the "average" customer assumes 200 minutes of use per month, of which 65 percent (130 minutes) is interstate calling. Calling time patterns employed by the report were apparently based on MCIWorldCom and Talk.com estimates. See Five Cents Per Minute Long Distance Rate plan '24/7' Now Available Anytime, Any Day from GTC Telecom, PR Newswire, Aug. 12, 1999.

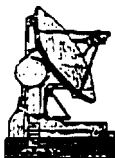
⁴⁴ According to an officer of the company, furthermore, MCIWorldCom's new calling plans represent less an effort to reduce prices to consumers than an attempt to reduce the carrier's marginal network costs across the entire body of its traffic, both business and residential, both voice and data. According to John Donoghue, senior vice president for consumer marketing, the five cent calling plans were intended to stimulate traffic volume on the company's network outside daytime business hours. The company's decision to focus on business customers has apparently influenced the engineering of its network, with the result that "[o]ur network is underutilized at night and weekends." Doug Levy, 5 Cents Now Buys an MCI Minute, USA Today, Aug. 10, 1999, at 3B. See also Reuters, Off-Peak Rates As Low as 5 cents In MCI Offer, N.Y. Times, Aug. 10, 1999, at C3.

difference exists between residential service to low-volume users and service to heavy callers. This suggests that the increasingly discriminatory price structures adopted for residential long distance have resulted from further tacit collusion among AT&T, MCIWorldCom, and Sprint.

42. In a similar vein, AT&T recently announced its “AT&T One Rate[®] 7¢ plan” that has a seven-cent usage charge for all calls with a fixed monthly fee of \$5.95. This plan has been filed by AT&T as a “promotional” plan, meaning that it could be withdrawn by AT&T in the near future. The advertising campaign for this plan is misleading, in that it offers only the seven-cent anytime rate and fails to mention the monthly charge. The average charge per minute realized by a customer with average usage is substantially higher than seven cents. For example, a customer with monthly bill of \$20 pays approximately ten cents per minute. Only the customer that purchases approximately 20 hours of long-distance service per month, resulting in a monthly bill of approximately \$90, pays \$0.075 per minute. Of course, the marginal price per minute equals seven cents in these examples, given that the fixed \$5.95 per month has already been paid. But most customers make their purchasing decisions repetitively, month after month, year after year, and the average charge per minute for their usage levels is the price on which a rational consumer would base her decisions. Only a monthly charge equal to costs of capital, and usage prices close to marginal costs, would be a “competitive” two-part price.

43. In sum, despite the high-profile advertising campaigns and talk in the press of “price wars,” these new price plans do not constitute a fundamental shift to competitive behavior. Instead, they are two-part tariffs with fixed monthly fees that have

the effect of increasing the price per minute for low-usage customers and reducing the price per minute only for users with well-above average usage levels. Thus, relatively few customers subscribe to these plans, compared to the millions of customers who continue to pay standard MTS rates. The results can better be characterized as monopoly-style discrimination, not emerging competition.



US Telecom Services Comments

Bruce J. Roberts
(212) 429-3459

Kirk Boodry
(212) 429-3450

James Powers
(212) 429-3467

**Dresdner
Kleinwort
Benson
Research**

24 March 2000

MCI WorldCom (WCOM-NASDAQ)

ADD

Price (23 Mar.):	\$42.88	12-mo. Target Price:	\$67	DJIA:	11,120
52-Wk. Range:	\$96-\$53	Market Cap.:	\$125B	S&P 500:	1,527
2001E EPS:	\$2.46	2001E P/E Ratio:	17.4x	2001E EV/Revenue:	3.2x
2000E EPS:	\$1.85	2000E P/E Ratio:	23.2x	2001E EV/EBITDA:	8.5x
1999A EPS:	\$1.33	Dividend Rate:	\$0.00	Dividend Yield:	n/a
'00-'05 EPS CAGR:	23%	'00-'05 EBITDA CAGR:	17%		

WCOM: Takeaways from our one-on-one meeting with CEO Bernie Ebbers and CFO Scott Sullivan

We recently sat down with MCI WorldCom CEO Bernie Ebbers and CFO Scott Sullivan to discuss the current state of affairs at MCI WorldCom. Topics included MCI WorldCom's competitive positioning, the private line business, the network, European aspirations, and local US competition. In addition, we received some interesting perspective from Bernie on his view of the telecom world.

Competitive Strategy

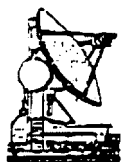
The focus for MCI WorldCom is execution, with a particular emphasis on controlling the customer. The company emphasized this over network technology and emphasized its recent contract win with America Online (AOL-\$70.50) for managed modems as an example of how a proven track record and service could win out over pricing sensitivity. The company did concede, however, that margins could be hurt and that it would compete on price to keep its customer base intact.

Private Line

In the wake of our discussion of the private line segment, we still believe that this could be a problem area for incumbents. The company tells us it has seen pricing compression of 30%-40% on express routes, compared to our assumption that pricing is falling at a 25% rate. EBITDA margins are in the 40% range, compared to our estimate of 60% margins, although Scott tells us that this percentage jumps around a lot.

In contrast, MCI WorldCom believes that a majority of its PL revenue base is intact because it is on non-express routes (i.e., regional lines) where emerging competitors like the New-3 carriers do not have facilities. For now, MCI WorldCom sees itself and AT&T (T-\$57.25-Add) as the only sellers of regional routes to Qwest (Q-\$48.38-Buy) and others. Bernie strongly suggested that he would never sell such regional capacity to the New-3.

Bernie agreed with our assessment that the entrance of the RBOCs (and utility providers, in our opinion) into LD would increase regional facilities availability and perhaps, lessen WorldCom's route-mile, and thus, LD pricing advantage over the New-3. Plus, since the 20,000-mile players touch 80% of the business market, we believe that the New-3 can still have a substantial impact on total PL pricing competition. One item of note is that approximately 85% of PL revenue is generated at bandwidths less than DS-3, where new entrants don't compete. So it appears that the New-3 are getting more than their share of high-bandwidth PL business versus the incumbents. MCI WorldCom



US Telecom Services Comments

Bruce J. Roberts
(212) 429-3459

Kirk Boodry
(212) 429-3450

James Powers
(212) 429-3467

**Dresdner
Kleinwort
Benson
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24 March 2000

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told us it is generating \$1 billion in long distance PL revenue per quarter, with 60% gross margins and 40% EBITDA margins.

WorldCom silently building brand-new OC-192 network

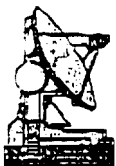
Management addressed concerns about network technology and capacity. More than 50% of the fiber in MCI WorldCom's network has been installed in the 1990s, and the company says it can meet capacity through 2004 with what is in the ground, even with network usage expanding 4x-8x annually. Where the company is laying fiber today it is putting in 100+ fiber strands and 4+ conduits. Over the next four years, MCI WorldCom could spend up to \$4 billion annually on network expansion. With the MCI merger, network reach is almost 45,000 route miles, and the Sprint (FON-\$55.63-Buy) merger adds another 2,000 route miles, in comparison to newer providers, which plan to have 20,000-30,000 route miles. As a result, MCI WorldCom estimates it terminates 80% of traffic at end offices as opposed to tandem switches.

On-net traffic/origination and termination

Management estimates that it originates about 4% of its total voice network traffic, compared to less than 0.5% in 1996, and the company is targeting 10% origination in 2 1/2 years. MCI WorldCom estimates that the 40,000 buildings on its network represent 85% of the addressable business market. Before the MCI merger, WorldCom had 5% penetration for all services (local, LD or bundled) within buildings connected. Post-MCI, market share increased to 20%-25%. We estimate that MCI WorldCom is originating only 1% of the traffic in buildings it is connected to, with the vast majority still going to the RBOCs. Our interpretation of this is that incumbent providers have much more sticking power in delivering services to the desktop than we originally thought, and that customers want the service and reliability that RBOCs (and PTTs) have traditionally provided.

Local competition

MCI WorldCom added 198,000 business access lines in Q4 99 and has reached the level of success it had hoped for when the MCI merger closed. MCI WorldCom is also accelerating efforts for residential local sales using UNE-P platform. The main focus here is increasing customer retention in LD. On a stand-alone basis, UNE-Ps generate 30% gross margins but little profitability after SG&A costs. Scott believes that, from initial indications, he's losing as much LD revenue as he's gaining in new local sales. Furthermore, MCI WorldCom doesn't view the RBOCs as the key threat to the LD business, but wireless substitution, which is another reason we like the RBOCs (they are big wireless players). In New York, MCI WorldCom has 200,000 UNE-P customers and believes that increased local revenue will offset lost LD revenue from Bell Atlantic's (BEL-\$59.63-Buy) entry into this segment. Bernie was cautiously positive on Bell Atlantic's efforts to open local markets, saying they had some bugs in the system that they were working out. In contrast, he believes that with SBC Communications (SBC-\$43.56-Buy) in Texas, it will be more difficult to offset lost revenue should that RBOC get in, because in his opinion, SBC does not have the systems in place to support local competition.



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International

MCI WorldCom believes that it has had a substantial impact on PTTs in Europe. There isn't as significant a structural separation of local and long distance service in Europe compared to the US, and as a result, all revenue originates on-net in Europe. London is its oldest and largest local network, and the company believes it has 10% market share in buildings it has connected there. Market share in Paris is lower, but is closing the gap rapidly, despite that network being turned up three years later. MCI WorldCom intends to touch 80% of the European business centers with its network when construction is completed (dates and route miles not supplied). The long haul segment should be completed in the next few years, although local network builds should continue for some years afterward. MCI WorldCom has not set a particular dollar target for European revenue.

Other thoughts, including M&A discussion

- The company does not have any major acquisitions on the radar screen and is focusing instead on the close of the Sprint merger. MCI WorldCom, with less than 20% of its revenue base in consumer, sees no need to get into cable television, although its recent MMDS acquisitions could be a vehicle for video if need be.
- Ebbers noted the high valuation of European wireline and wireless companies compared to their US counterparts, and indicated that MCI WorldCom would not be a buyer in Europe, but would continue to build wireline and wireless networks. From the opposite direction, he notes that an acquisition by a European PTT is something he would like to see, because he believes that PTTs are slower to execute, lessening his competition in the US.
- Ebbers said WCOM would keep the Sprint local exchange business once the merger closed, but added he would not have bought it otherwise, and that WCOM probably would not buy more lines.
- Wireless substitution could be a greater threat to LD revenue growth than RBOC entry. Over the last 18 months, average revenue per customer has declined as wireless usage has picked up. In that regard, we believe PCS could be a retention tool, but MCI WorldCom says it hasn't changed its voice LD expectations because of this. Instead, PCS gives MCI WorldCom another service to bundle with its existing product line. The company wants to be a bundling leader, which should mitigate pricing pressures in any one segment and increase customer retention.
- Net net, there is not any likelihood on the horizon that MCI WorldCom will again become a 40% grower. Scott and Bernie reiterated that MCI WorldCom has settled into a mid-teens EBITDA growth pattern. Despite PL competition and the fact that other companies are now competing in MCI WorldCom's growth businesses, we believe that the company is solidly managed and is trading at an attractive price. We recommend that investors build positions in the stock, which we rate Add.